

Effective Risk-Based Decision Making: ORSA and Beyond

by Guillaume Briere-Giroux and Mark Scanlon

Introduction

November 2011 saw the finalization of the *NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual* that outlines a new requirement for U.S. insurers to conduct an ORSA and report findings on a regular basis. ORSA is a process in which insurers assess their risk and capital management framework given current and future risks in light of their business strategy. While there are important qualitative aspects to an ORSA, the ability to quantify risk and capital today, as well as projected into the future, is vital to a successful ORSA process.

In this essay, we focus on the “Prospective Solvency Assessment” aspect of the NAIC’s ORSA. This places a spotlight on an insurer’s strategic decision making from a risk and capital management perspective. It requires those in senior management to describe actions they would take to address possible adverse changes in their risk and solvency position, i.e., what they would do to reduce risk, increase capital, and/or adjust the business strategy. As described in the NAIC’s guidance, this process should:

- Forecast risk capital (which may differ from regulatory capital) in a robust manner
- Be closely tied to the insurer’s business planning, over a multiyear time horizon
- Be aligned with the insurer’s stated risk appetite
- Consider normal and stressed environments
- Consider impacts from relevant internal and external drivers.

While the NAIC’s ORSA introduces this as a formal requirement, it is arguably an exercise companies should already be doing as part of a sound enterprise risk and capital man-

agement framework. Further, we contend that by applying a slightly broader scope than the specific requirements of the NAIC’s ORSA, insurers can develop this into a valuable process to support risk-based decision making.

To be effective in supporting risk-based decisions, not only must the risk metrics provide senior management with information that is relevant, reliable and actionable, but the systems and processes in place need to be able to provide this information on a timely basis. In this essay, we initially consider how to determine which metrics to include in such a process and then discuss some important business requirements and practical challenges for implementing a calculation approach to support it.

Which Metrics Drive Decision Making?

Technology and competition have contributed to the rise of complex products, such as variable/ indexed annuities with living benefits and universal life with secondary guarantee found in the life insurance sector. As part of the ongoing management of their business, insurers require a variety of metrics to be calculated on a regular basis for different purposes. Identifying which metrics to use and understanding how they relate to each other to drive decision making can be challenging. For example:

- What seems to be adequate with one metric (e.g., economic) is often inadequate with another (e.g., statutory results, management reporting and liquidity management).
- What seems a reasonable strategy in the short term may lead to suboptimal outcomes in the long term.

From an enterprise risk management (ERM) perspective, the metrics used should reflect the way senior management (and

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the board) thinks about risk. When they think about the company’s strategic objectives and potential risks to achieving those objectives, what are the metrics that they really care about? For companies with an enterprise risk policy and formalized risk appetite and tolerance statements in place, the board and senior management’s views will be explicitly stated; so identifying which metrics are important—and how they combine to drive decisions—should be a lot clearer.

Insurers’ risk appetite and tolerance statements typically reference a combination of balance sheet and earnings metrics. This reflects the sometimes conflicting requirement to achieve objectives related to enhancing long-term value and capital strength while avoiding short-term earnings surprises (or, similarly, the need to meet certain short-term earnings objectives, subject to protecting some minimum level of capital strength). Figure 1 presents a summary of metrics included in U.S. insurers’ risk appetite statements (results from Towers Watson’s 2010 Global ERM Insurance Survey). Looking across the industry, no single measure stands out, with economic, regulatory, rating agency and GAAP measures being noted as important. In general, we would expect larger, more

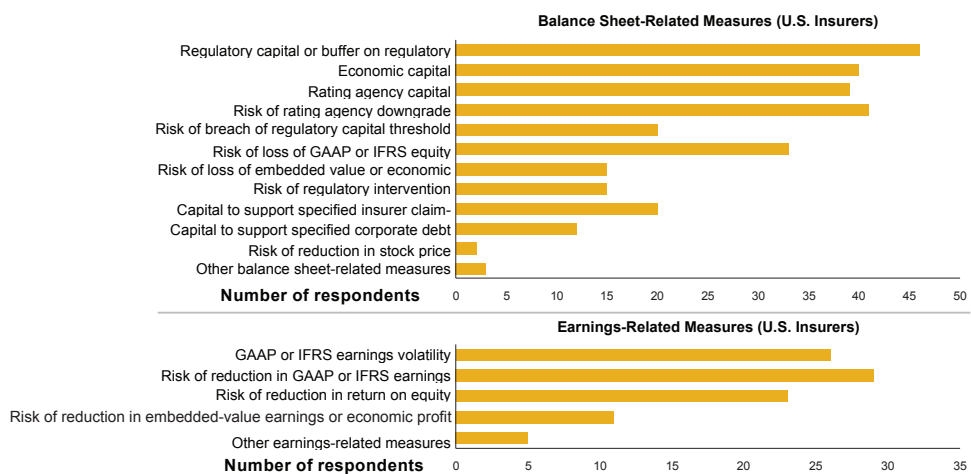
complex and diverse companies to require more metrics than smaller companies with relatively simple products.

We note that while a lot of focus has been placed in recent years on economic capital (EC) as an emerging best practice metric to evaluate risk and guide management decisions; by itself it is usually insufficient to drive effective decision making. As the survey results indicate, other metrics are also relevant to insurers—for example, despite some recognized shortcomings from a risk measurement perspective, statutory risk-based capital remains an important metric and driver of decisions for U.S. insurers. Another challenge with EC for many insurers is that they currently focus on EC at a specific valuation date so their analysis is limited to a risk snapshot at a point in time. Consequently, their analysis does not provide insights into how the capital and profits will be impacted over time and under different strategies, measurement bases and environments.

How Can You Actually Do It?

Now that we have established a need to look at different metrics across multiple time horizons, we turn our attention

FIGURE 1: RISK METRICS USED BY U.S. INSURERS IN RISK APPETITE AND TOLERANCE STATEMENTS



Source: Towers Watson’s 2010 Global ERM Insurance Survey
 Q.14 Which of the following measures of risk are used in your risk appetite/tolerance statement? (79 respondents)

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to what this process might look like in practice. Considering that it is often a significant undertaking for insurers to calculate capital on a single measurement basis at a single valuation date, insurers will likely need to rely on various simplifications and approximations in implementing this expanded process. In so doing, insurers need to strike the right balance between having an approach that is sufficiently complex to provide reliably accurate and granular information, but simple enough that results can be produced quickly and clearly enough that they can be used by senior management.

We believe that management should define a variety of “what if” scenarios, against which it can evaluate the impact on the identified metrics over the business planning horizon. The business strategy should form the “base case” projection, with others defined as variations around that owing to changes in internal and/or external factors. The individual scenarios should reflect plausible combinations of key drivers, such as equity markets, interest rates, implied volatilities, credit spreads and defaults. Ideally, insurers should look at scenarios involving multiple risks moving together, as well as some which focus on a specific risk only. Specifying scenarios with differing degrees of severity can provide useful insights (e.g., “moderate” vs “extreme”). Similarly, insurers may want to assess various “good” scenarios, identify possible “killer” scenarios, or scenarios reproducing past financial crises. In addition to the business strategy, the insurer’s risk appetite and tolerance statements should be used to help specify scenarios that will provide meaningful information to management. Those in senior management should be actively involved in specifying or reviewing the scenarios to ensure their views are reflected and that the process is seen as valuable to them.

While there is inherent subjectivity in deciding which scenarios to examine, the iterative thought process involved in

scenario selection reinforces understanding of risk exposures and provides further insights into the short-term and long-term effectiveness of risk mitigation strategies. That is, the loss in absolute accuracy from using a more limited number of scenarios is compensated by the information gained from:

- Investigating the emergence of results within scenarios, short-term volatility vs. long-term volatility
- Testing the performance of alternative strategies on a projected basis (e.g., sales, investment strategy)
- Ability to observe results using a variety of measurement bases along each path.

Focusing on the multiyear projections and how they can best serve to enhance risk-based decisions, we believe that they should include or reflect a number of key capabilities:

- Reflect credible future economic environments that reflect dependencies between the relevant economic variables, such as interest rates, equity markets, credit spreads, defaults and implied volatilities.
- Reflect the impact of new business, with the level and mix of new business varying to reflect the specific environment being projected and policyholder behaviors and assumptions projected consistently with the projected economic environment.
- Accurately represent management strategies like hedging, asset liability management, credited rate setting, premium setting, reinsurance and new business strategy (per above) while enabling alternative strategies to be tested.
- Allow the expected basis to be dynamically re-evaluated over time as the actual experience under a particular scenario emerges.
- Include a refresh of balance sheets and income state-

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ments under all the relevant bases (e.g., economic, statutory and management reporting, such as U.S. GAAP) over the time horizon consistent with the business strategy.

- Aggregate results in a logical manner and allow multiple views of the granular contributors of the results (e.g., by risks, by line of business).
- Enable adequate consolidation of results and interactions between different segments of the enterprise, including tax, capital flows and their associated constraints.
- Enable the modeler with drill-down capabilities and detailed reports that provide ability to efficiently understand/validate results.
- Produce results quickly enough so that the information is “fresh” and can be reported to senior management (and other stakeholders as appropriate) in a way that is clearly understood and allows them to act upon it.

While the above may seem ambitious, by leveraging and

refining existing modeling methodologies and systems, we believe it is an achievable goal. Indeed, a number of companies have already developed the type of detailed, multi-year, multi-metric calculations described above; although, in some cases, targeted more specifically at a line of business or product line rather than the entire enterprise. As the demands for richer risk-based information increase, we expect to find more companies adopting similar approaches and applying them to their strategic business planning and a broader set of risk measurement needs—such as an ORSA.

On a final note, it is important to remember that ultimately decisions need to be made by people, not models; so, while we don’t want to downplay the significance of the modeling required to support the process, we want to highlight that the real value for those in senior management will come from them actively participating throughout the process.

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